REMARKS/ARGUMENTS

Claims 1-9, 11-24, 29, 31-37, 54, 64, 76, 89, 102, 117, 133, 150, and 163-178 are currently pending.

35 U.S.C. § 103(a)

Claims 1-3, 7-22, 29, 33, 54, 64, 76, 89, 102, 117, 133, 150, and 163-178 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Charbonnier, U.S. Patent No. 5,241,686, in view of D'Amico, U.S. Patent No. 5,127,100, and further in view of Barnett, U.S. Patent No. 5,509,051.

Claims 4-6, 23, 24, 31, 32, 35-37, 70-72, 83-85, 96-98, 111-113, 127-129, and 144-146 stand rejected under 35 U.S.C. §103 as unpatentable over Charbonnier, in view of D'Amico, U.S. Patent No. 5,127,100, and Barnett, U.S. Patent No. 5,509,051, and further in view of Karlsson, U.S. Patent No. 5,640,677.

Claims 165 and 166 were rejected under 35 U.S.C. §103(a) as being unpatentable over Charbonnier, U.S. Patent No. 5,241,686, in view of D'Amico, U.S. Patent No. 5,127,100, and Barnett, U.S. Patent No. 5,509,051, as applied to claim 1 above, and further in view of Jones, U.S. Patent No. 6,192,245.

Applicant's response of June 13 2008, from page 12, line 20, through page 15, line 2, is herein incorporated by reference.

The claims recite the novel feature of modifying the measured strength of the communication from the current cell by a current cell outset value, the current cell offset value being dependent on the offset information. A hysteresis offset may be used to modify the measured strength of the communication from the current cell at the station, the offset being dependent on the current cell being the current cell of the station. In other words, applying an offset to the current cell received signal strength from the currently active call base station because it is the current action cell reduces the amount of "ping-pong" selection activity which could occur at boundaries of cells.

As discussed previously and at length, Charbonnier (US-5241686) discloses a method for optimising the distribution of the radio electric load on a radio communication cellular network at fixed intervals. Charbonnier discloses in column 6 that a synthesizer is positioned successively and cyclically on each frequency (for radio channels used as a beacon route, i.e. base station frequencies). Then for each frequency, the output signal from the modem is analysed to

determine if it is a valid beacon route, i.e. is a valid base station, and possibly read the characteristic data of the relay amongst which the value of the field correction parameter (H) for the base station is determined. At this point the field strength or power (E) of the electric field for the beacon route may also be measured. The unit may then compute the difference between the power of the received field and field correction parameter and stores the corrected field value in memory. Thus, all of the base stations have a field correction value applied associated with the available capacity of the base station in question.

It is only when the mobile has scanned the entire set of beacon routes listed in the table of frequencies, including the beacon route of the channel in which it is currently located, that the route compares the values of the corrected field and determines the beacon route having the highest corrected value.

Thus Charbonnier, as determined by the Patent Office, does not disclose the feature of measuring the time for which the measured strength of the communication from the at least one cell exceeds the measured strength of the communication from the current cell, at least one of the measured strengths having been modified in a modified step.

Thus claim 1 is novel over Charbonnier.

As discussed above the beacon signal of the cell is corrected by a correction parameter value, which is the offset value. Although all of the cell/beacons have offset values dependent on the current capacity of the cell, there is no disclosure of a specific current cell offset value.

Charbonnier applies an offset to each cell and does not favour or indicate bias whether or not the beacon is currently in use by the given mobile unit.

Therefore the claim is furthermore novel over Charbonnier as the present application recites a current cell offset value linked, i.e. an offset associated with the cell being the current cell and other further offset values which are applied to non-current cell signals.

As indicated previously, there would be an advantage in the embodiments of the present application over the prior art in that for the prior art systems there is no or only limited ways to prevent the mobile jumping from cell to cell quickly as the handover would be highly dependent on the loading of the cell. Thus the loading correction factor has a harsh correction factor. It could be imagined that current cell station would jump from cell A to cell B if cell B was not considered to be heavily loaded but may attempt to immediately offload the station back to cell A and vice versa very soon after. The present invention would overcome such a problem as the

offset is linked to the current cell would decrease the probability of premature offloading of the cell communication.

Thus the present invention implements a hysteresis or offset value depending on being the cell currently being used "the current cell" and therefore effectively biases the decision to the current cell to prevent such rapid handover processes from having to occur unless absolutely necessary.

The Patent Office has furthermore cited D'Amico (US-5127100) and notes that it does not explicitly teach a timer. Furthermore even if the documents were to be combined there would be no disclosure of at least one of the novel features as discussed above as there is no current cell hysteresis value.

The Patent Office has acknowledged that even in combination, Charbonnier and D'Amico do not teach "modifying the measured strength of the communications in the current cell by current cell offset value, the current cell offset value being dependent on the offset information". The Patent Office asserts that Barnett remedies this acknowledged deficiency of Charbonnier and D'Amico.

Applicant respectfully disagrees.

The Patent Office refers to the hysteresis value RSSI-H which is added to the signal strength of the serving cell when being compared to either RSSI-TH or RSSI-THP to prevent a ping pong effect. The Patent Office alleges that this teaches the feature "modifying the measured strength of the communication from the current cell by a current offset value, the current cell offset value being dependent on the offset information."

Applicant disagrees for the following reasons. First, the offset value described in Barnett is fixed. As described on column 6, line 21, a default value of 3dB is provided for RSSI-H. Consequently, it is clear that this value is not, as defined in the claims, obtained from "decoding a communication from at least one of the current cell and the at least one other cell" (see the third feature of the method claims). Consequently it is submitted that the hysteresis value of RSSI-H cannot teach a "current cell offset value dependent on the offset information". To put this another way, if one of ordinary skill in the art were to attempt to combine the teachings of the RSSI-H into the technique he had previously arrived at by combining Charbonnier and D'Amico, it is submitted that he would not look to provide a current cell offset value dependent

on the offset information but would rather look to include a fixed default value for the current cell offset value, and in particular a value of 3dB. Nevertheless, the above notwithstanding, it is further noted that the hysteresis value RSSI-H is added to the RF signal strength when being compared with either RSSI-TH or RSSI-THP. With reference to column 6, line 4 to 9, of Barnett, "the designation RSSI-TH refers to the nominal cell selection threshold for an individual cell. This nominal threshold is permanently configured into the system. RSSI-THP refers to a dynamic cell selection threshold that is determined in accordance with certain operating criteria of the system".

Neither of these two values, the RSSI-TH and the RSSI-THP, are equivalent to the "measured strength of the communication from the at least one other cell" as modified by the "at least one further offset value in dependence on the obtained offset information". By contrast, they refer to nominal cell selection thresholds for an individual cell configured permanently and dynamically.

Consequently, should one of ordinary skill in the art be motivated to combine the teachings of Barnett into the teachings of the previously mentioned prior art, it is respectfully submitted that such person would not arrive at the present invention because such person would be taught to add a hysteresis value to the RF signal strength and then compare it against known selection threshold valves. In other words, one of ordinary skill in the art would have to somehow be motivated to ignore the teachings of Barnett that the comparison is to be made with selection thresholds and rather look to comparing the modified RF signal strength with other indicia.

It is clear that this goes against the teachings of Barnett since in Barnett the purpose of adding the hysteresis value and comparing the signal strength with selection thresholds is to determine whether and to what degree the current cells should be handed off, not whether an alternative cell is worth handing off to as in the present invention.

For the above reasons, it is submitted therefore that the combination cited by the Patent Office is unable to teach or suggest the claimed invention. This is not only because the combination cited cannot teach all of the features of the claims as alleged by the examiner, but also because the resulting combination cited by the examiner would be illogical given the nature of the documents themselves.

It is clear that all of the independent claims recite the subject matter described above and are therefore novel and non-obvious for at least the same reasons.

Karlsson shows a threshold is used for comparisons with serving and neighbor signal strengths (e.g., 132, 127 of Figure 11). Karlsson also discloses a signal quality increment called either an offset or hysteresis (column 2, lines 35-36) in contrast to Applicant's claimed invention in which offset and a further offset refer to different values. Karlsson discloses a threshold such as in column 13, lines 56-60, as follows: "If, however, at 127, it has been determined that the signal strength for the neighboring cell was greater than the threshold value, the system moves to add this neighbor's cell to the candidate list at 129 and thereafter to decision 128 to evaluate whether or not the last neighbor has been evaluated;" i.e., **the threshold value of Karlsson is not equivalent or similar to the current cell offset of Applicant's claimed invention because as is clear in, e.g., Figure 10, the threshold is measured against signal strength and is not used to modify the value of the signal strength**. There is disclosure of adding inaccuracies in the mobile station (column 7, lines 24-26 and 57-59) but the disclosed inaccuracies in the mobile station are not obtained from decoding and so do not teach or suggest "decoding a communication from at least one of the current cell and the at least one other cell to obtain offset information." Karlsson discloses (column 11, lines 50-54) "Another way to provide the mobile the mobile with the frequencies, the neighbor types, two signal strength levels, i.e., the threshold and the hysteresis, and another hysteresis would be to broadcast the threshold and the hysteresis separately and let the mobile calculate the two levels." The threshold disclosed in column 11, lines 50-54, of Karlsson is described in column 11, lines 11-13, as "the threshold value is the threshold of sufficient signal strength in the neighbor cell plus a corresponding hysteresis or offset value." Like Charbonnier, Karlsson considers hysteresis and offset to be the same (also see column 2, lines 35-40). In Karlsson, there is no current cell hysteresis value.

As such, Karlsson does not remedy the deficiencies of Charbonnier, D'Amico, and Barnett.

Jones et al discloses a method for determining a handover for a mobile station in a multi-cellular communication system having a serving cell, a plurality of neighbouring cells, and at least one control cell where the cell includes at least one macro cell and a plurality of micro cells. The document does disclose as indicated in the flow diagram of Figure 2 and the Figure 1 that the mobile station monitors measurement reports for the serving cell and neighbour cells, and

that when a mobile station served by a cell 3 detects that a neighbour cell 4 is being received at a power which exceeds a threshold, it starts a timer.

Jones does not teach the modification of the measured strength of the communication from at least one of the current cell and the at least one other cell in dependence on the obtained offset information and modification of the measured strength of the communication from the current cell with a further offset value. In Jones, there is no current cell hysteresis value.

As such, Jones does not remedy the deficiencies of Charbonnier, D'Amico, and Barnett and/or Karlsson.

Thus, claims 1-9, 11-24, 29, 31-37, 54, 64, 76, 89, 102, 117, 133, 150, and 163-178 are allowable over the prior art of record.

The Patent Office is respectfully requested to reconsider and remove the rejections of the claims 1-9, 11-24, 29, 31-37, 54, 64, 76, 89, 102, 117, 133, 150, and 163-178 under 35 U.S.C. 103(a) based on Charbonnier in view of D'Amico and Barnett, Charbonnier in view of D'Amico, Barnett, and Karlsson, or Charbonnier in view of D'Amico, Barnett, and Jones, and to allow all of the pending claims 1-9, 11-24, 29, 31-37, 54, 64, 76, 89, 102, 117, 133, 150, and 163-178 as now presented for examination. An early notification of the allowability of claims 1-9, 11-24, 29, 31-37, 54, 64, 76, 89, 102, 117, 133, 150, and 163-178 is earnestly solicited.

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